










Date: Thursday, 7/12/2007 10:40:54 AM  
User: Kim Johnston

# Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FLOAT SKID ASSEMBLY
Job Number	: 33526A		
Estimate Number	: 10756		
P.O. Number	: N/A	Part Number	: D412742043
This Issue	: 7/12/2007 S.O. No. : N/A	Drawing Number	: D3391 REV F
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : LANDING GEAR	Drawing Revision	: F
Previous Run	: 33525A	Material	: N/A
Written By	:	Due Date	: 7/30/2007 Qty: 1 Um: Each
Checked & Approved By	: <u>07.27.12</u>		
Comment	: Est Rev A 05.10.13 New Issue KJ/JLM		
	: Est Rev B 06.02.13 ECN 773 dwg @ rev.D EC		
	: Est Rev C 07-05-28 As per Rev F JLM		
Additional Product			
Job Number: 			
Seq. #:	Machine Or Operation:	Description :	
1.0	DC	DOCUMENT CONTROL	
			
Comment: DOCUMENT CONTROL If D412-742-043 is a W/O on it's own, Photocopy bluefile and create labels per PPP D412-742-043 CHG003			
2.0	D3391023	Mid Tube Assembly	
			
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) pick: Qty Part Number Description Batch 1 D3391-023 Mid Tube Assembly <u>B31845</u> <u>esj</u>			
3.0	D3391025	Aft Tube Assembly	
			
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) pick: Qty Part Number Description Batch 1 D3391-025 Aft Tube Assembly <u>B33643</u> <u>esj</u>			
4.0	D35641	WEARSHOE	
		 *	
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) WEARSHOE Batch: <u>B31417</u> <u>m.l</u>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 7/12/2007 10:40:54 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 33526A

Part Number: D412742043

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

5.0	D35643	WEARSHOE
-----	--------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
WEARSHOE  
Batch: B 31419

*m-h*

6.0	D35645	WEARSHOE
-----	--------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
WEARSHOE  
Batch: B 33802

*m-h*

7.0	D35661	GASKET
-----	--------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
GASKET  
Batch: B 33805

*m-h*

8.0	D35665	GASKET
-----	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET  
Batch: B 33483

*m-h*

9.0	AN3C4A	BOLT
-----	--------	------



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)  
BOLT  
Batch: M 105057

*m-h*

10.0	AN3C6A	BOLT
------	--------	------



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)  
BOLT  
Batch: M 103693

*m-h*

11.0	AN3C7A	BOLT
------	--------	------



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)  
BOLT  
Batch: M 103668

*m-h* 07/08/18

(IX)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 7/12/2007 10:40:54 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 33526A

Part Number: D412742043

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

AN960C10L

washer



Comment: Qty.: 44.0000 Each(s)/Unit Total: 44.0000 Each(s)

washer

Batch:

M105143

M.K.

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Spray inside tube of D3391-021/-023/-025 with LPS-3 as per Dwg D3391

A/R LPS-3

M104161

2-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.

A/R Sikaflex-241/-291

Expiry date:

M104989  
08-01

3-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Coat bolts with LPS "procyon".

Seal all bolts with sikaflex except ones with inserts on inside of tube, hand tighten only bolts with no sikaflex.

A/R LPS Procyon

A/R Sikaflex-241/-291

Expiry date:

M104251  
M104989  
08-01

4-Remove "T" pins once sikaflex is dry.

5-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.

M.K.  
07/08/18

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

En 07/08/20

15.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-742-043

Location:

PPP Rev:

PPP 33564

07/08/210

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: ☒ Date: 9/8/22

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 7/12/2007 10:40:54 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID ASSEMBLY

Job Number: 33526A

Part Number: D412742043

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

DA/08/22

Job Completion



U 07-08-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

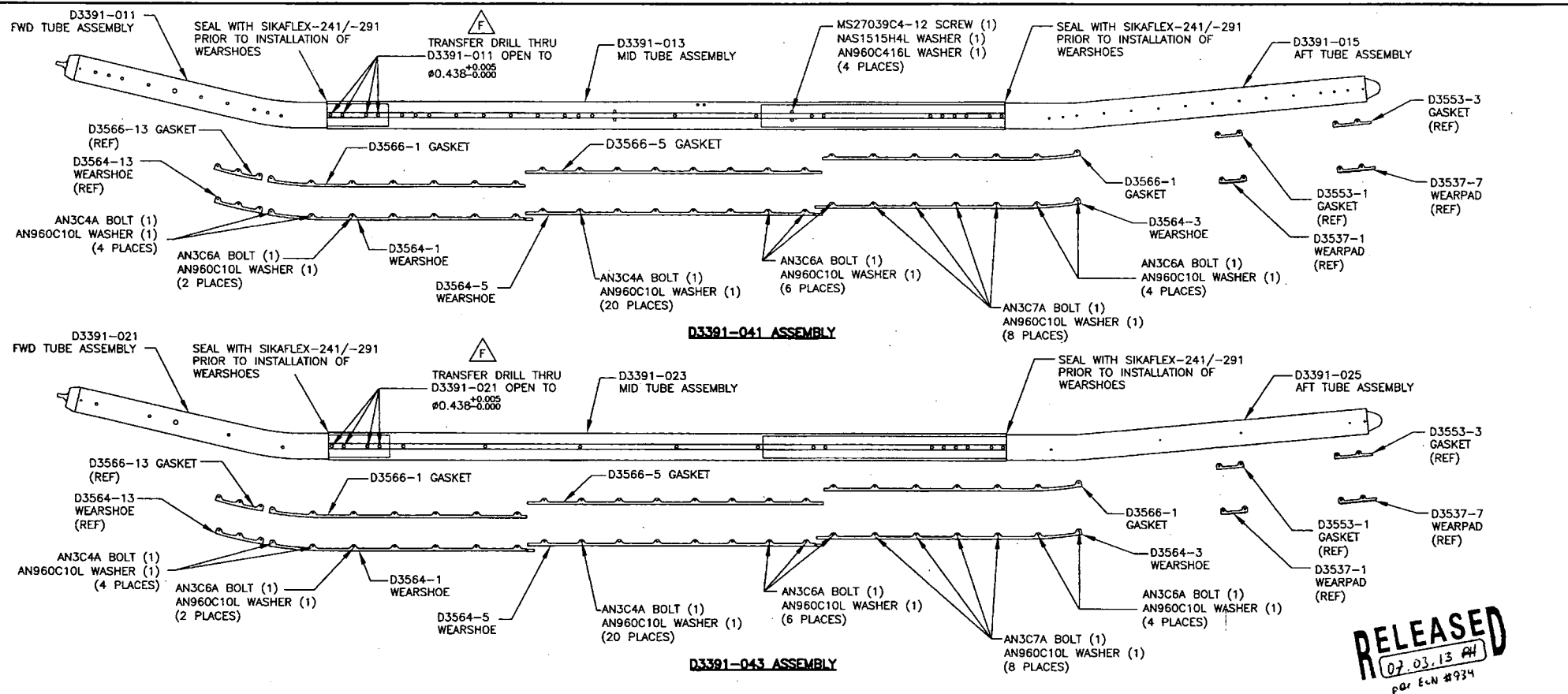
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries





#### D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	QTY	PART NUMBER	DESCRIPTION
041	043		
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
1		D3391-021	FWD TUBE ASSEMBLY
1		D3391-023	MID TUBE ASSEMBLY
1		D3391-025	AFT TUBE ASSEMBLY
1	1	D3564-1	WEARSHOE
1	1	D3564-3	WEARSHOE
1	1	D3564-5	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER

#### GENERAL NOTES

- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (Ø0.250-Ø0.257) FOR WEARSHOE INSERTS. C'SINK Ø0.391/Ø0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.

COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

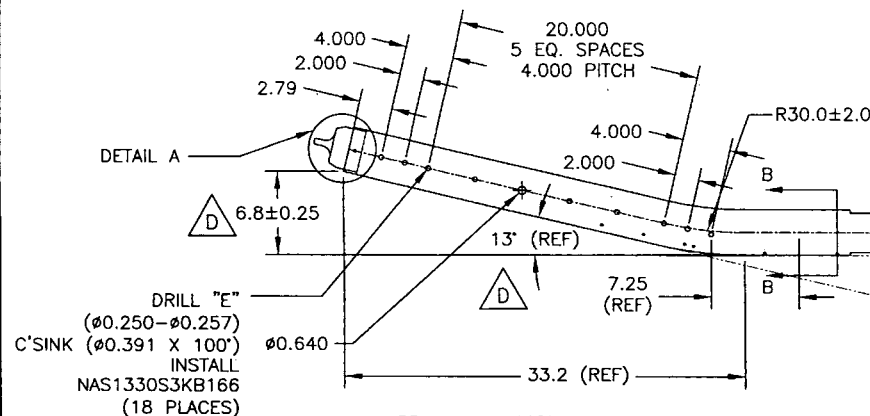
F	07.01.18	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021
E	06.04.25	CHANGE TOLERANCE, EASE MANUFACTURE
D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
C	05.09.27	LENGTHEN AFT EXTENSION
B	05.06.10	DRAWING UPDATES
A	05.02.07	NEW ISSUE
DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
CHECKED	APPROVED	PORT HADLOCK, WA
DATE	TITLE	REV. F
07.01.18	412 FLOAT SKIDTUBE	SHEET 1 OF 5
		SCALE
		NTS

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 55526A

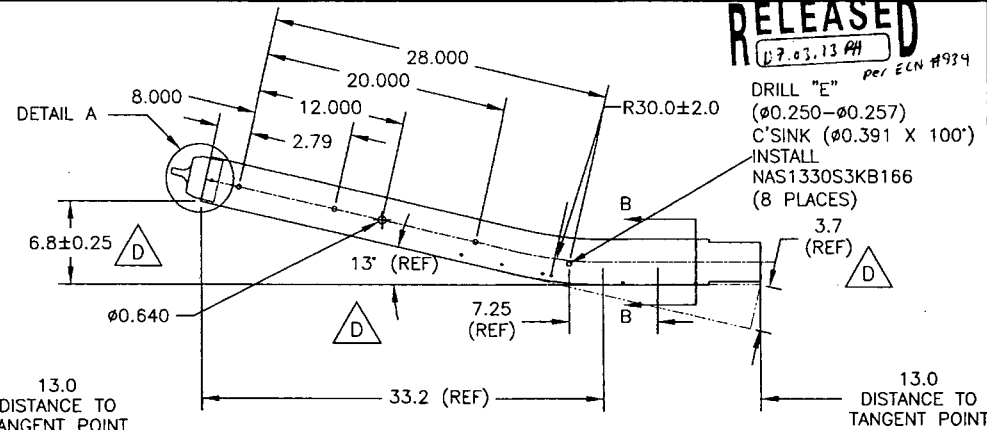
**RELEASED**  
07.03.13 AH

per ECN #934

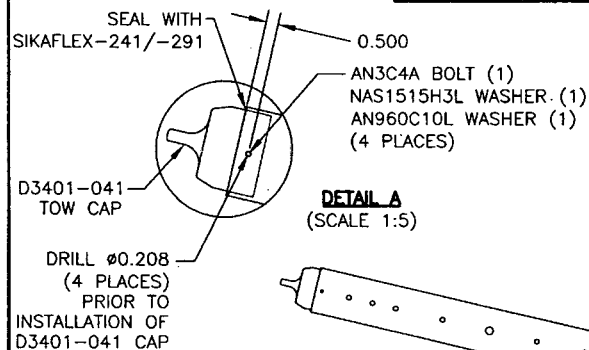
DRILL "E"  
( $\phi 0.250 - \phi 0.257$ )  
C'SINK ( $\phi 0.391 \times 100'$ )  
INSTALL  
NAS1330S3KB166  
(8 PLACES)



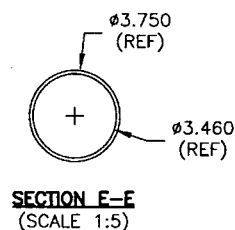
**D3391-011 ASSEMBLY AND BENDING DETAIL**



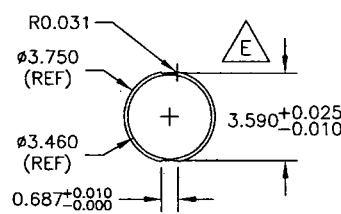
**D3391-021 ASSEMBLY AND BENDING DETAIL**



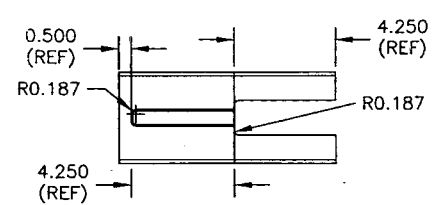
**DETAIL A**  
(SCALE 1:5)



**SECTION D-D**  
(SCALE 1:5)



**SECTION C-C**  
(SCALE 1:5)



**VIEW Z-Z**  
(SCALE 1:5)

D3566-13 GASKET

**D3391-011/-021 WEARSHOE ASSEMBLY**

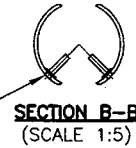
D3564-13 WEARSHOE

AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(6 PLACES)

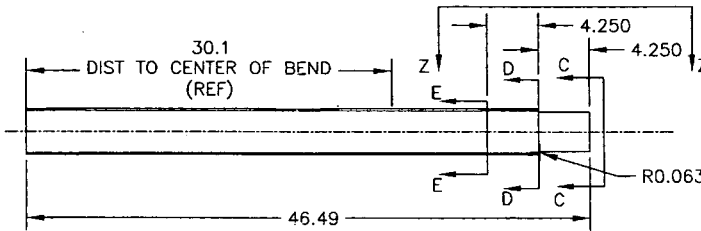
**D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST**

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
10	10	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
10	10	AN960C10L	WASHER
30	20	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)

5  
DRILL "E"  
( $\phi 0.250 - \phi 0.257$ )  
C'SINK ( $\phi 0.391 \times 100'$ )  
INSTALL  
NAS1330S3KB166  
(12 PLACES)



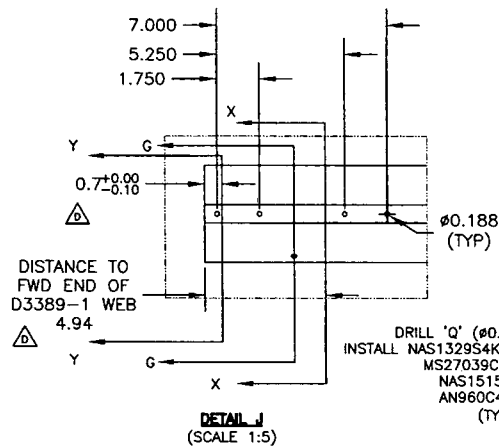
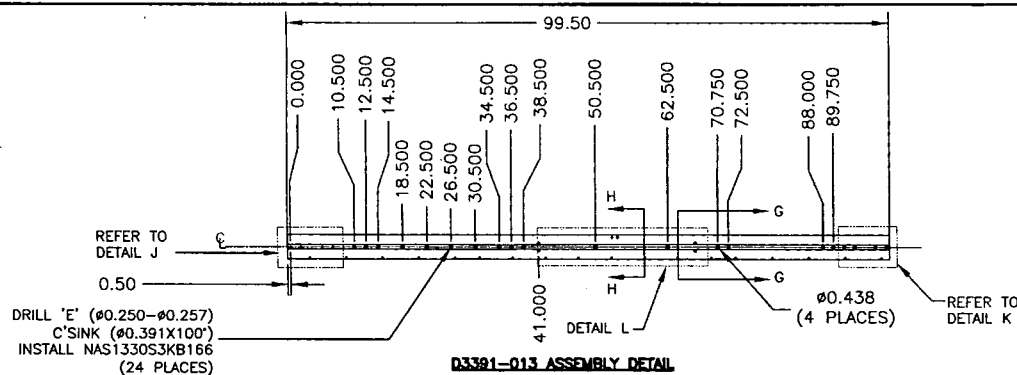
**SECTION B-B**  
(SCALE 1:5)



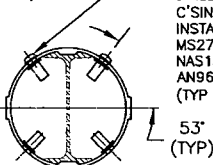
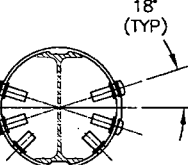
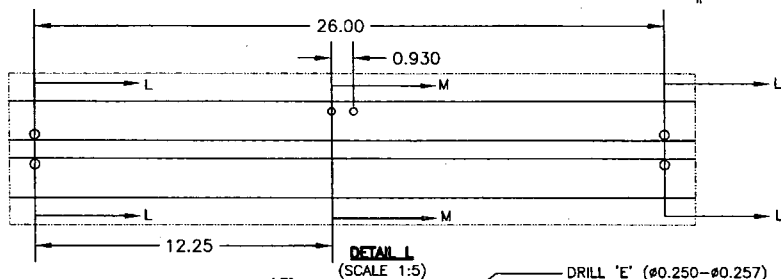
**D3391-1 DRILLING AND CUTTING DETAIL**  
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)

COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.		DESIGN PH	DRAWN BY PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED PH	APPROVED PH	DRAWING NO. D3391
DATE 07.01.18		TITLE 412 FLOAT SKIDTUBE		REV. F SHEET 2 OF 5 SCALE 1:10

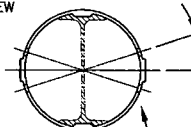
SHOOT COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITH DRAFT NOTICE  
NO. 1  
3-26-64



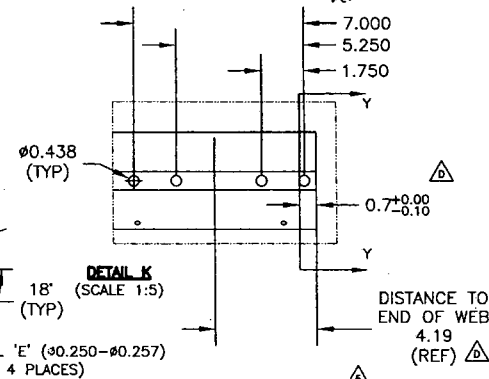
DRILL 'Q' (#0.332-#0.338)  
INSTALL NAS1329S4KB140 INSERT  
MS27039C4-08 SCREW  
NAS1515H4L WASHER  
AN960C416L WASHER  
(TYP 4 PLACES)



DRILL 'E' (#0.250-#0.257)  
C'SINK (#0.391X100")  
INSTALL NAS1330S3KB116 INSERT  
MS27039C1-09 SCREW  
NAS1515H3L WASHER  
AN960C10L WASHER  
(TYP 4 PLACES)



DRILL 'E' (#0.250-#0.257)  
(TYP 4 PLACES)

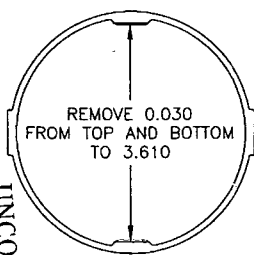


**D3391-013/-023 MID TUBE ASSEMBLY PARTS LIST**

QTY - 013	QTY - 023	PART NUMBER	DESCRIPTION
X		D3391-013	MID TUBE ASSEMBLY
	X	D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330S3KB116	INSERT (OR NAS1330C3KB116)
24	10	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)
4		NAS1329S4KB140	INSERT (OR NAS1329C3KB140)
4		NAS1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW

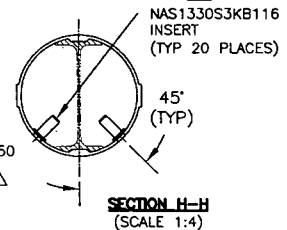
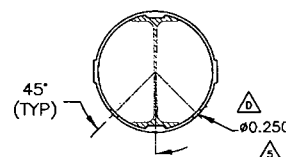
**D3391-013/-023 MID TUBE ASSEMBLY**

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QS



REMOVE 0.225  
FROM TOP AND BOTTOM  
TO 3.800  
(0.7 FROM BOTH ENDS)

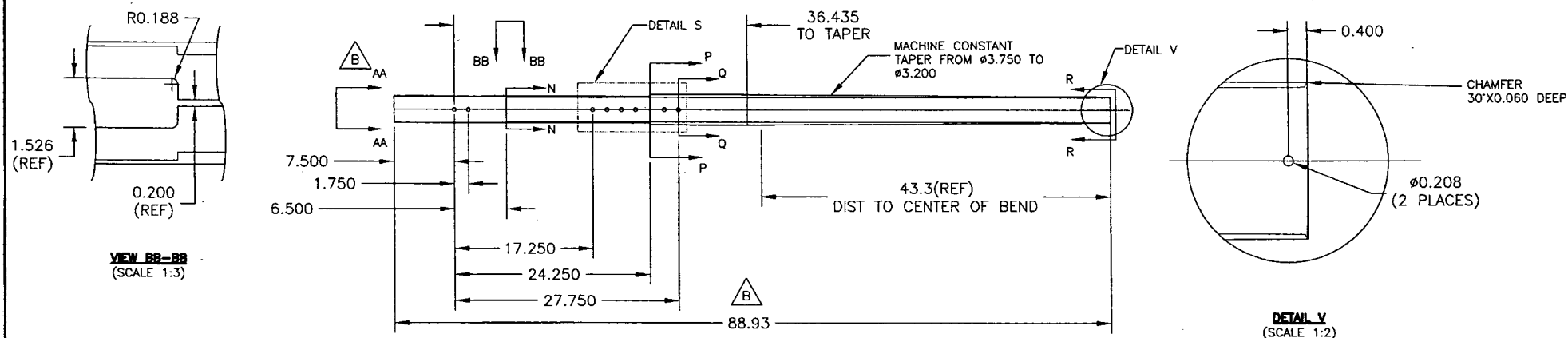
**SECTION Y-Y**  
(SCALE 1:4)



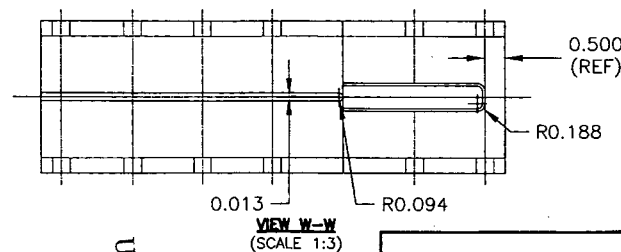
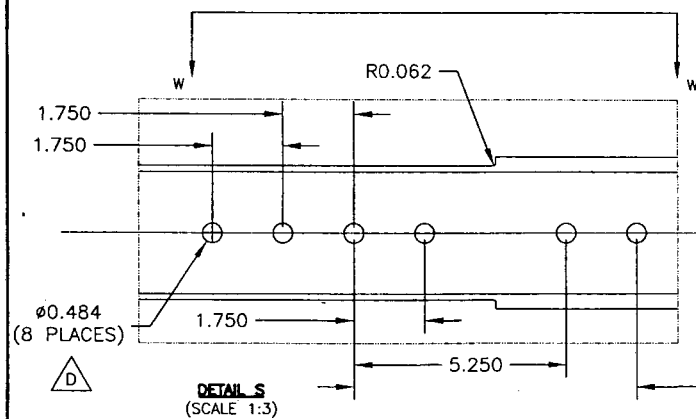
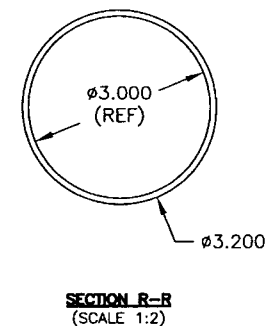
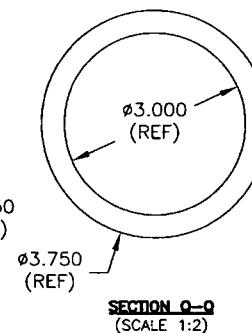
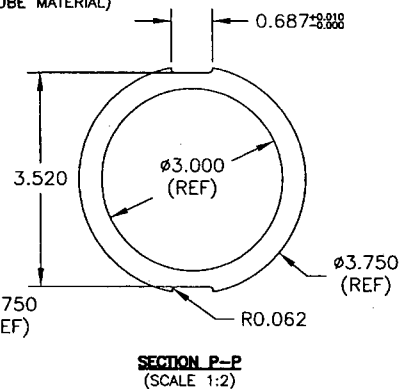
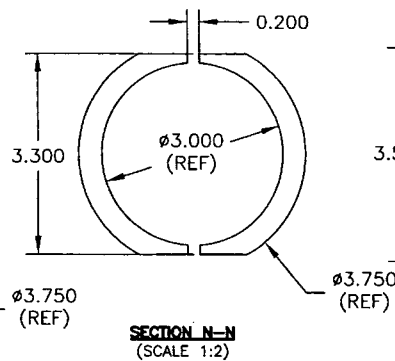
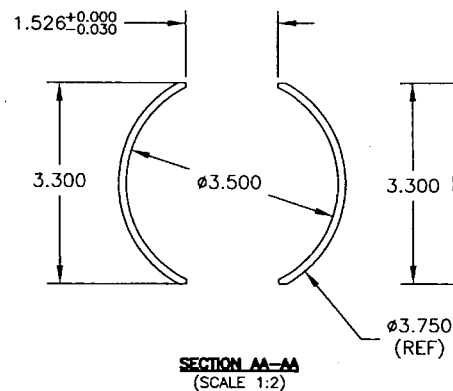
COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.		DESIGN RH	DRAWN BY AH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, MA
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED H	APPROVED H	
DATE 07.01.18		TITLE 412 FLOAT SKIDTUBE		REV. F SHEET 3 OF 5 SCALE 1:20

NO. 38526A  
WORK ORDER  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

**RELEASED**  
07.03.13 PH  
DCI ELN #934



**D3391-3 AFT DRILLING AND CUTTING DETAIL**  
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



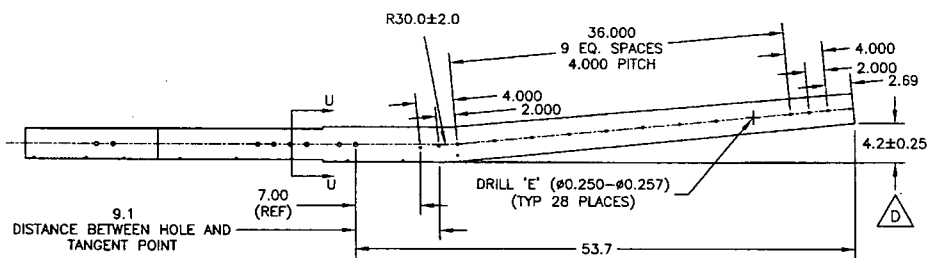
**RELEASED**  
07.03.13 PH  
P.O. ELN #934

COPYRIGHT © 2006 BY DART AEROSPACE USA, INC.

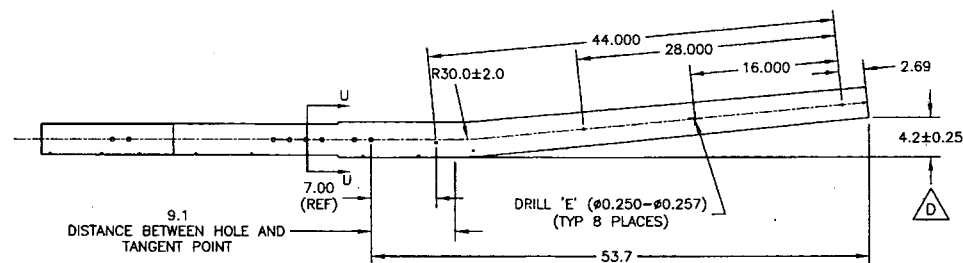
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN PH	DRAWN BY PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA	REV. F
CHECKED H	APPROVED H	DRAWING NO. D3391	SHEET 4 OF 5
DATE 07.01.18	TITLE 412 FLOAT SKIDTUBE	SCALE 1:12	

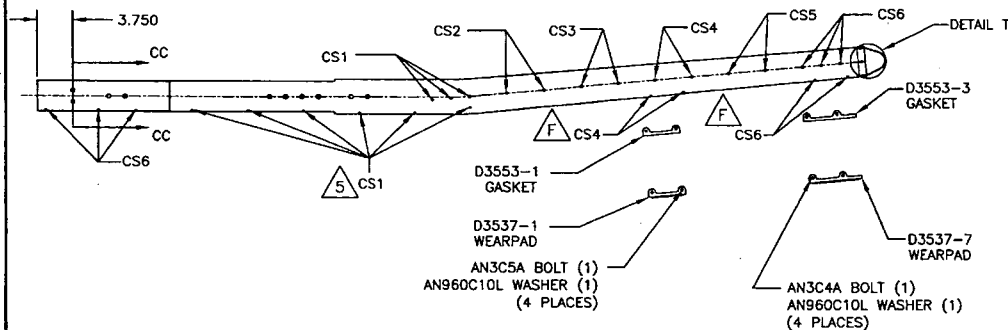
NO. 3526A  
WORK ORDER  
UNCONTROLLED COPY  
ENGINEERING  
RETURN TO  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE



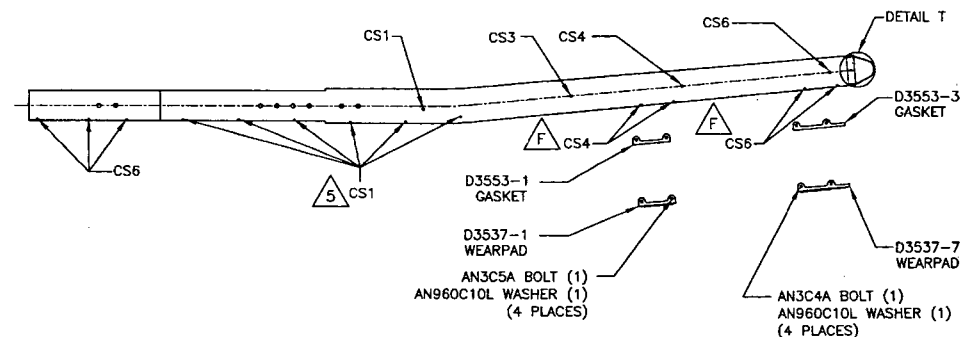
**D3391-015 BENDING AND ASSEMBLY DETAIL**



**D3391-025 BENDING AND ASSEMBLY DETAIL**



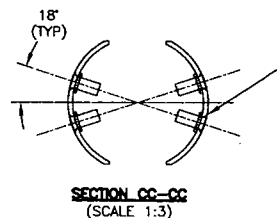
**D3391-015 INSERT AND WEARPAD INSTALLATION DETAIL**  
(SEE TABLE)



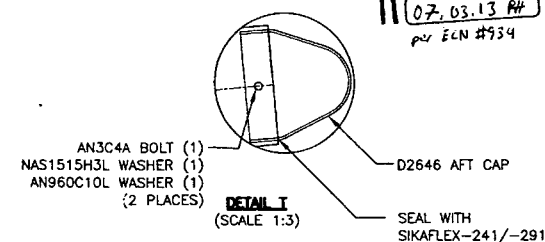
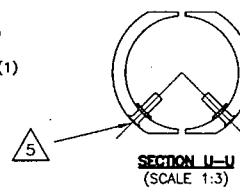
**D3391-025 INSERT AND WEARPAD INSTALLATION DETAIL**  
(SEE TABLE)

**D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST**

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
18	14	NAS1330S3KB366	INSERT (OR AES10KB366)
4	2	NAS1330S3KB316	INSERT (OR NAS1330C3KB316)
8	6	NAS1330S3KB266	INSERT (OR NAS1330C3KB266)
4		NAS1330S3KB216	INSERT (OR NAS1330C3KB216)
16	12	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)
4		NAS1330S4KB151	INSERT (OR NAS1330C4KB151)
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
2	2	NAS1515H3L	WASHER
10	10	AN960C10L	WASHER



DRILL 'Q' (Ø0.332-Ø0.338)  
C'SINK (Ø0.529X100")  
NAS1330S4KB151 INSERT (1)  
(4 PLACES)



C'SINK AND INSTALL NAS1330S3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	NAS1330S3KB366
CS2	4	2	Ø0.391	NAS1330S3KB366
CS3	4	2	Ø0.391	NAS1330S3KB316
CS4	8	6	Ø0.391	NAS1330S3KB266
CS5	4	2	Ø0.391	NAS1330S3KB216
CS6	16	12	Ø0.391	NAS1330S3KB166

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

DESIGN RH	DRAWN BY RH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED H	APPROVED H	DRAWING NO. D3391
DATE 07.01.18	TITLE 412 FLOAT SKIDTUBE	REV. F SHEET 5 OF 5 SCALE 1:12

**RELEASED**  
07, 03.13 RH  
per EEN #934

WORK ORDER  
13306A  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
RETURN TO  
ENGINEERING  
FOR COPY